

A Pilot Evaluation of the Asthma-Friendly Schools Initiative



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BACKGROUND & ACKNOWLEDGMENTS

The Texas Asthma Control Program (TACP) is located within the Chronic Disease Branch, Health Promotion and Chronic Disease Prevention Section at the Texas Department of State Health Services (DSHS). It is supported by a Cooperative Agreement, *Addressing Asthma from a Public Health Perspective* with the Centers for Disease Control and Prevention (CDC), Air Pollution and Respiratory Health Branch and the Division of Environmental Hazards and Health Effects, National Center for Environmental Health. In collaboration with other state organizations and community partners, TACP strives to improve the quality of life for Texans living with asthma. Activities include conducting asthma surveillance, supporting and promoting state and local partnerships, promoting policies that address and improve asthma outcomes, funding effective interventions that increase asthma self-management and reduce the burden of asthma in Texas, and evaluating activities to guide the use of program resources and interventions.

TACP funds several asthma interventions across Texas. In order to support programs as they move to an outcome-based program structure and evaluation, TACP contracted with The University of North Texas Health Science Center's School of Public Health (UNTHSC) to conduct an evaluation of one of their grantees, the Asthma-Friendly Schools Initiative (AFSI) program in Austin, Texas.

TACP's goals of the evaluation include:

1. Ensure that TACP uses its resources effectively and efficiently
2. Demonstrate the value of the program
3. Extend knowledge on best practices to improve asthma outcomes and prevent asthma
4. Build evaluation capacity in order to strengthen outcome assessment

It is important to note that this short-term evaluation project is limited in time and scope and it is primarily laying the groundwork for more rigorous evaluations in future projects. As such, the Individual Evaluation Plans (Centers for Disease Control and Prevention [CDC], 2010) emphasize capacity building towards future assessment of medium and longer-term outcomes.

The evaluation stakeholder group includes: Principal Investigator Emily Spence-Almaguer, Co-Investigator David Sterling, and Research Assistants Rita McWaters and Goutham Ghanta, all with UNTHSC, as well as Gail Finneran with the American Lung Association, and Department of State Health Services staff: Elaine Braslow, TACP Coordinator, Erin Wickerham, TACP Epidemiologist, and Lisa Wyman, Manager, Office of Surveillance, Evaluation and Research.

TABLE OF CONTENTS

INTRODUCTION	3
EVALUATION METHODOLOGY & KEY FINDINGS.....	6
Data Collection Tools	6
Evaluation Questions	8
Analytic methods	9
Findings.....	9
SUMMARY OF RECOMMENDATIONS	14
Start with the School Leadership	14
Find Community Partners and Champions.....	17
Cultivate a Culture of Evaluation.....	19
LIMITATIONS & BARRIERS	21
Capacity.....	21
Sample Size and Lack of Data	21
CONCLUSION	22
DISSEMINATION PLAN	23
REFERENCES.....	24

INTRODUCTION

In Texas Public Health Region 7, almost 8% of children ages 0-17 have been diagnosed with asthma (Texas Asthma Control Program [TACP], personal communication, 9/2013). As childhood asthma is the leading cause of chronic disease related school absenteeism (Environmental Protection Agency [EPA], 2010), Texas schools need to be included in solution-building efforts to address asthma. Removing asthma triggers in Texas schools and teaching children and the adults around them about asthma self-management can dramatically reduce absenteeism and improve school performance. However, Texas schools face many demands and implementing public health programs in them can prove difficult. Furthermore, as the No Child Left Behind standards increase each year, schools are likely to minimize school-day activities that are not directly associated with the curriculum.

In addition, school nurses operate most school based health programs and relying on them to implement public health initiatives may not be the most effective strategy. A recent qualitative evaluation found that school nurses cited four main barriers to implementing a health program in the school: competing responsibilities as they respond to both clinical and educational needs, lack of parent engagement, scheduling logistics, and lack of support from administrators and teachers (Langley, Nadeem, Kataoka, Stein & Jaycox, 2010).

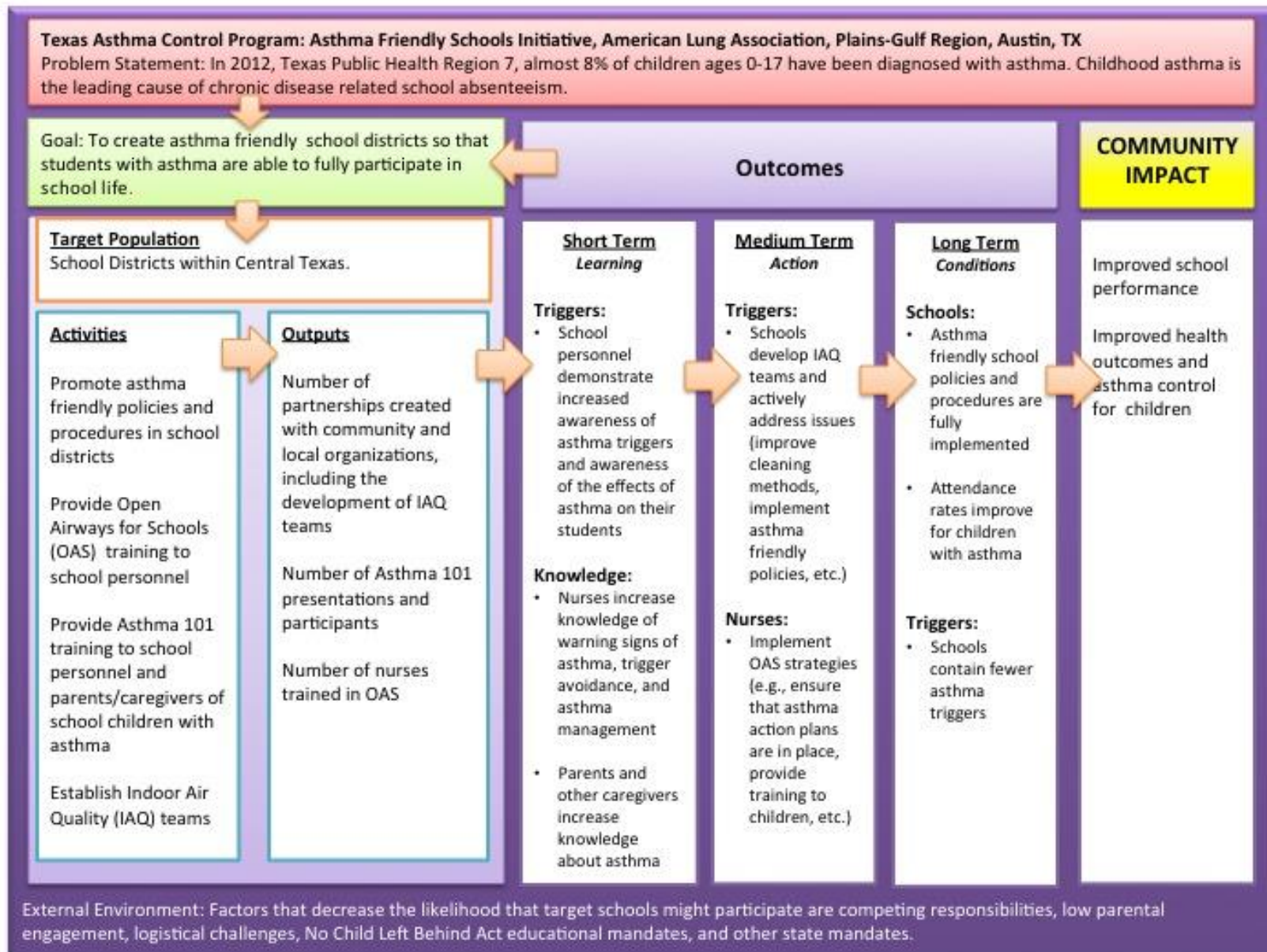
This pilot evaluation looked closely at one TACP-funded program, the Asthma-Friendly Schools Initiative (AFSI) that is operated by the American Lung Association (ALA) in Austin, Texas. AFSI works to develop Air Quality Teams to help create asthma-friendly school districts and to educate school staff, students, parents, and community members on asthma management and control, and ways to address indoor and outdoor air quality issues using the Open Airways for Schools (OAS) and Asthma 101 curriculums (see Figure 1). Designed by the ALA, OAS is an evidence-based six week curriculum delivered in schools that teaches children with asthma (ages 8-11) how to detect the warning signs of asthma, avoid their triggers and make decisions about their health. Each lesson is 40-minutes and is generally taught during the school day in a group setting by a school nurse or volunteer (ALA, n.d.). AFSI also teaches the ALA's Asthma 101 curriculum which is a one-hour and 45-minute program that "focuses on school faculty and staff as a critical link in the effort to maintain a network of support for asthmatic students, and can proactively reduce or prevent asthma crises and minimize areas of liability" ("Asthma101," n.d.).

Despite the evidence-base in support of these interventions, AFSI has faced numerous barriers in developing Air Quality Teams and bringing the OAS and Asthma 101 curriculums into the

schools. AFSI has reported that there is a lack of district support for the programs and that a large asthma-related research project is underway in the target area, which prevents AFSI from implementing programs in those schools.

AFSI was able to train school nurses and other volunteers in the OAS curriculum; however, none were able to fully implement the program. Therefore, this evaluation focused on examining the other ways nurses may have used the knowledge gained in the OAS training to improve the school environment or management of asthma. The purpose of this pilot project was to build evaluation capacity through an in-depth assessment of asthma management practices within schools in Central Texas. This data will be used to design future outreach efforts by AFSI and to strengthen future outcome evaluation.

Figure 1: Logic Model for the Asthma-Friendly Schools Initiative (AFSI) in Austin, Texas



EVALUATION METHODOLOGY & KEY FINDINGS

This pilot evaluation project consisted of a preliminary analysis of survey and interview data with school nurses. The evaluation design was intended to build capacity at the ALA to improve assessment of program outcomes.

Data Collection Tools

The data was expected to come from three sources: Asthma-Friendly Schools Initiative Champion Award applications, qualitative interviews with school nurses, and baseline survey data from school nurses enrolling in the Open Airways for Schools online training. There were no applicants for the award, so it was not a source of information for this report.

Asthma-Friendly Schools Initiative Champion Award Applications. AFSI promoted the ALA's Asthma-Friendly Schools Initiative Champion Award by emailing the application to school nurses and trained OAS facilitators. Created by the American Lung Association, this award recognizes schools that are taking steps towards creating a healthy learning environment for teachers, staff, and students who have asthma. Schools designated as asthma-friendly are those that work to maximize asthma management, reducing environmental triggers in the school environment, and building education and awareness programs for students and staff. To apply, schools are asked to fill out an application regarding their current asthma-friendly practices, which captures:

1. The number of students with asthma at the school.
2. The types of school, district and state policies related to asthma management.
3. A summary of community partners or organizations that have helped the school address asthma management.
4. The type of school-based programs the school has implemented to support a safe and healthy school environment for students with asthma.
5. The types of successes the school has experienced in implementing a comprehensive, long-term asthma management program.
6. A description of the school's master plan for long-term asthma management.
7. A description of the school's evaluation plan.
8. The types of strategies the school is implementing such as using asthma action plans, educating school staff, proactively maintaining healthy indoor air quality, and ensuring ready access to medication.

The award process can provide AFSI with preliminary data that will help to identify current best practices, help them focus efforts towards what is already working well, and identify areas to further strengthen. Since there were no award applicants, the evaluation team further investigated local trends and nationally identified best practices for creating Asthma-Friendly Schools.

Mixed-method Interviews with School Nurses. The evaluation team contacted all school nurses in Central Texas who completed the OAS curriculum since 2012 and invited them to participate in a face-to-face interview or a telephone interview. The primary motives for conducting interviews with school nurses were to determine 1) how nurses are integrating information from Asthma 101 and OAS into their daily practice, and 2) best strategies to obtain measurements of other potential outcomes for future program evaluations.

School nurses who agreed to be interviewed by phone were compensated for their time with a \$20 gift card. This incentive was offered by the subcontractor who performed interviews because many school nurses have a very rigid work schedule and they likely had to find time outside of their normal hours to talk to us. The data gained from the school nurses interviews are used in designing future outreach efforts by AFSI, developing outcome measures, and conveying the results of this year's educational efforts.

Baseline Survey Tool. The evaluation team supported AFSI in their development of an online survey designed to capture baseline data regarding asthma-related policies and practices before someone is trained in the OAS curriculum. When a school nurse or volunteer expressed interest in the OAS program, AFSI sent them the survey invitation. After six months to a year, the survey can be administered again to understand ways the OAS curriculum was used and to what extent. In particular, the survey will be helpful to identify impact in schools where the nurse was trained but never fully implemented the OAS curriculum. During the pilot study period, only two nurses expressed interest in becoming an OAS facilitator. When a sufficient sample size of these surveys is reached, the data will be analyzed for trends and will provide an assessment of the current state of asthma-related policies and practices in schools.

Evaluation Questions

TABLE 1: ASTHMA-FRIENDLY SCHOOLS INITIATIVE EVALUATION DESIGN

Purpose	Evaluation Question	Data Sources	Operational Definitions	Analytic Strategy
Identify asthma management strategies used by nurses in schools following completion of the OAS training	Following training on Asthma 101 and the OAS curriculum, what are nurses doing to improve asthma management in their schools?	Interviews with nurses who completed training	The interview was comprised of open and closed-ended questions assessing potential changes	All results were entered into excel. Numerical findings were reported using descriptive statistics and qualitative results were coded and reported using thematic discussion.
Identify best practices in schools to reduce asthma and improve attendance	What are the characteristics of schools that are actively promoting asthma management and what kinds of successes/outcomes have they observed?	Asthma-Friendly Schools Initiative Champion Award applications	The award application included narrative and closed-ended questions assessing asthma management	No award applications were received.
Identify the asthma strategies used by school nurses prior to completing OAS training	To what extent are school nurses managing asthma in their schools prior to completing the OAS training? In what areas might they continue to improve?	Baseline pilot survey	The pilot survey included questions that assess knowledge and current management practices	The responses were entered into excel. Responses were examined to determine whether they are in alignment with the intent of the questions.

Analytic methods

Qualitative. All qualitative interview data were entered into an excel spreadsheet. These included interview transcripts and open-ended survey responses.

Qualitative coding procedures included line-by-line coding for general content, axial coding where tree-like structures of categories and sub-categories are established, and selective coding where themes and interactions between axial structures are identified.

Quantitative. There was not a sufficient sample size to conduct quantitative analysis.

Data collection and quality control procedures. Interviews were audio recorded and transcribed by the evaluation team. The pre-training survey tool was hosted online by Survey Gizmo. AFSI was responsible for asking school nurses to complete the survey before taking the OAS training. Data were monitored to ensure data choices are complete and that questions are understandable and valid.

Findings

The sections below describe the results that were obtained in this evaluation.

Evaluation Question 1. There were 15 nurses trained in the OAS curriculum in the target area and an additional 27 individuals outside the target area since 2012 by AFSI. Each nurse was contacted three times by email and once by phone and each was offered a \$20 gift card to compensate them for their time. One nurse agreed to take part in the study. As a result of this low response, the evaluation team obtained Institutional Review Board (IRB) approval to invite nurses outside of the target area to participate in the study. These additional interviews are in progress and findings will be included in an addendum to this report.

While only one nurse responded, this nurse was able to provide thoughtful and detailed responses. The nurse said “the training was fantastic” and she has enjoyed receiving emails from the ALA. She said the emails are “filled with great resources and are very helpful”. She added that “the challenge is not the training we receive, the challenge[s] are the time constraints in which to present the class”. She said she sees about 30-35 children who need treatment or medication daily and another 45-50 children a day who need nursing care. She indicated that there was no time in the school day to pull children out of class.

In the past, when she taught health programs to students, she would do so during physical education (PE) time. However, there is now a state mandate that children must take part in a

“I would like the ALA to help me advocate for administrative support for school based asthma education” - A school nurse

certain amount of organized exercise and with budget cuts, PE time has been limited and children are not allowed to miss it. She went on to say that children with asthma are often behind academically and therefore teachers are unwilling to let them leave class.

Even though she faces numerous logistical problems in formally teaching the OAS class, she has been able to teach the asthma management techniques she learned to students and their families on a one-on-one basis. She expressed a desire to have time during the school day to offer the program (although she did state that the children do not like to be pulled out of class for OAS as there is a stigma attached). If carving out time during the school day is not possible, her second wish would be for transportation offered for students so they can take part after school. She also desired more teacher buy-in and administration support. **She said that the administration at her school does not fully understand the effect of asthma on academics. She said she would like the ALA to help her advocate for administrative support for school based asthma education.**

She said that the program is really valuable but it is just not being taught as it should. She suggested that the ALA could offer the program online as a web conference and it could be done afterschool. This would also allow parents to get more involved.

When asked about environmental triggers at her school she indicated that smells are the main trigger, as some teachers use fragrances in their class and some children come to school smelling heavily like smoke. She also said that some have pets in their classroom. When asked about whether they have an Indoor Air Quality (IAQ) Team at her school, she said that she assumes they do but did not know who is responsible.

When asked about how she assists children with asthma in her school, she said that she uses asthma action plans. At the elementary level, they encourage their students to leave their medicine in the office since elementary children do not have good management techniques and she wants to monitor them to make sure they find relief. She does not use the AIRS (Asthma Incidence Reporter) database which tracks how many days students with asthma have been absent and can produce a report on the cumulative effects of asthma on a school over a specific time frame. Instead she uses a standardized form provided by the Central Texas Asthma Group.

Limitations. Timing was a considerable limitation in this study. The evaluation team did not receive approval to conduct interviews with school nurses until the end of the school year (more than 2 months following our initial IRB submission). With most nurses out for the summer, only one nurse agreed to be interviewed.

Recommendations. Next year, we suggest starting the interviews much earlier during the school year and allowing several months to conduct them since nurses' schedules are busy.

Additionally, it may be better to follow-up with an email survey to those who are unable to commit to a telephone or face-to-face interview.

Evaluation Question 2. To determine the characteristics of schools in the target area that were actively promoting asthma management, AFSI marketed the ALA's Asthma-Friendly Schools Initiative Champion Awards Program. Despite not receiving any nominations for this award, AFSI is currently working on a marketing campaign and incentives to make this awards program successful for the 2013-2014 school year. Ideally, this awards process will provide AFSI with preliminary data that will be helpful to identify current best practices and will help them focus efforts towards what is already working well and in which areas AFSI might be able to best support them to become more asthma-friendly. When data is available, the evaluation team will look for local trends and compare answers to nationally identified best practices.

Limitations. The awards announcement was made late in the academic year when schools were focused on administering state standardized tests. Additionally, the announcement was sent to school nurses and their supervisors and did not include other administrators.

Recommendations. We recommend that AFSI introduce the awards application process at the beginning of the year. We also recommend that this announcement be sent to multiple contacts at the school. The evaluation team contacted personnel at other successful local school awards programs and learned that they sent application announcements to school superintendents, principals, and school maintenance staff. For example, the Maryland Asthma-Friendly Schools Initiative formed a team of school nurses, school nursing supervisors, the office of school health, local health departments and others before introducing the awards application. This team worked together to create the application form, to form program goals, and to hand pick the first schools in their state that would be invited to apply. The first 15 schools they chose to work with were ones that either had known issues and/or had expressed an interest in asthma in the past. This team walked these schools through the process and all 15 received an award (Hess-Mutinda, personal communication, August 27, 2013).

We recommend that AFSI narrow its target area for the IAQ teams and awards program and focus on small subset of schools in the target area. By identifying a subset of schools that are ready and willing to apply for the Award Programs, it will ensure that at least some schools will apply for the award. Especially in the first year of the new awards program, schools might need additional support as they go through the application process. As these schools gain recognition for their hard work, it might encourage other schools to apply as well.

Evaluation Question 3. The evaluation team worked with AFSI to develop an online survey tool designed to capture baseline data regarding asthma-related policies and practices before someone is trained in the OAS curriculum. During the pilot study time period, two people

signed up for OAS training and completed the baseline assessment. An initial review suggests that this survey has face-validity and the response sets are complete. Upon receiving more surveys, further analysis can be done. Since there were only two responses, a qualitative approach was taken to analyzing and reporting the findings.

Respondents. One respondent was a school nurse and one was a community volunteer at a local school.

Rates of Asthma. The school nurse reported case managing 25 students and estimated that 25% of students with asthma at the school were not being case managed (i.e., an estimated un-served population of 8 students with asthma). The volunteer reported working with 2 students and that 95% of students with asthma at the school were not being case managed (i.e., an estimated un-served population of 38 students with asthma). The survey also asked respondents to rank health problems at their school. One respondent ranked asthma as the most important and the other respondent ranked it third, behind infections and first aid.

Perceived Barriers. Respondents said that low parental engagement, lack of equipment/medical supplies, and lack of policies and/or procedures were some of the barriers they believed they would encounter as they implemented the OAS curriculum. Echoing the findings of the nurse interview, the volunteer respondent wrote that transportation might be an issue if the OAS curriculum is taught after school.

Current Asthma Related Practices. Both respondents said that they are using a database other than AIRS to track students with asthma. One indicated the use of several strategies including,

- Using asthma action plans
- Allowing ready access to asthma relief medications
- Making referrals
- Providing access to a consulting physician/healthcare provider for the school district

Indoor Air Quality and Integrated Pest Management. The survey asked respondents about measures the school takes to proactively maintain healthy indoor air quality and manage pests. Both said that their school used the measures listed below:

- The school has a fragrance-free policy.
- Floors are vacuumed regularly.
- The building and classrooms are free of dust.
- Plumbing leaks are fixed quickly
- Classrooms are free of pets.
- The problem or pest is identified before taking action/applying pesticides.
- Vegetation, shrubs and wood mulch are kept at least one foot away from structures.
- Cracks and crevices in walls, floors and pavement are either sealed or eliminated.

- Food-contaminated dishes, utensils, surfaces are cleaned by the end of each day.
- Litter is collected and disposed of properly at least once a week.

One respondent reported that his/her school did the following:

- Kitchen areas and locker rooms are well ventilated.
- The school has a latex-free policy.
- Lockers and desks are emptied and thoroughly cleaned at least twice yearly.
- Garbage cans and dumpsters are cleaned regularly.

Neither respondent was sure if their school used the following techniques:

- Mold is cleaned with water and detergent and then dried.
- Materials such as ceiling tiles and carpet contaminated with mold are replaced quickly.
- Fertilizers should be applied several times (e.g., spring, summer, fall) during the year, rather than one heavy application.
- If pesticides are necessary, the school uses spot treatments rather than area-wide applications.

Environmental Programs. Both respondents said their schools worked to assure tobacco-free buildings and grounds. One respondent said his/her school worked to manage students' exposure on high pollution days.

Asthma Education. Both respondents said that their school does not currently offer a formal asthma education program to school staff, parents, or students.

Champions. While neither listed themselves as an asthma champion, they did mention the work they are doing in regards to asthma. One highlighted parental involvement as being crucial to the success of OAS and another reported having worked with the local Medicaid clinic.

Limitations. The timing of the pilot study was a limiting factor for the baseline survey data collection. With most nurses out for the summer, only two signed up to become facilitators.

Recommendations. By helping AFSI develop this survey and by teaching them how to use an online survey program, we were able to help increase the evaluative capacity of AFSI and set the stage for on-going monitoring of results.

SUMMARY OF RECOMMENDATIONS

Three main processes were created to strengthen outcome assessments. First, the evaluation team worked with AFSI in developing a logic model in which outputs and short, medium, and long-term objectives were created. This was an important step to move from the tracking of outputs (e.g., numbers trained) to considering what will result from the training.

Second, the evaluation team worked with AFSI to develop an online survey tool designed to capture pretest data regarding asthma-related policies and practices before someone is trained in the OAS curriculum. After the pilot is over, these nurses can be surveyed again (at 6 to 12 months) to find ways the OAS curriculum was used and whether they have implemented new asthma management strategies in their schools.

Third, the evaluation team conducted a review of other, similar asthma programs to understand how others were able to achieve and evaluate their successes. The following provides a summary of that review:

Narrow the Focus and Start with the School Leadership

For the most part, AFSI has been focused on reaching out to school nurses and their immediate supervisors. There have been efforts to reach out to principals, superintendents, and medical partners.; however, they were met with little success and were not the main focus of AFSI's activities. We recommend that AFSI try a more concentrated effort to recruit school leadership in a small subset of schools in the target area. With a small staff, small budget, and a large target area, AFSI is stretched thin. By identifying a smaller subset of schools to work with, AFSI can spend more time finding ways to reach out to the school leadership. This is important because, with a few exceptions, our review of how other programs were able to successfully implement asthma programs within schools shared a common theme – they started with the school superintendents and then worked their way down. In fact, the CDC indicates that implementation of the proven strategies for addressing asthma within a coordinated school health program requires a “team effort that involves all school administrators, faculty, and staff as well as students and parents” (CDC, 2006, p. 1).

From a review of barriers commonly encountered by Indoor Air Quality (IAQ) Teams, dialogue with AFSI staff, a discussion with an evaluator of asthma programming, and the one school nurse interviewed, it seems that schools are reluctant to implement Indoor Air Quality Teams because schools are afraid that any problems that are found would result in costly repairs, fines, or other punitive measures. To counter these fears, asthma programs have had success in engaging school administrators by addressing the schools' priorities and goals.

"Our district implemented an IAQ management plan that led to unprecedented academic success for our students. Since 2005, we have seen an increase of 17.3 percent on test scores and an increase in the average daily attendance rate to 97 percent, allowing students to have more classroom time."

– Frank DiNella, Keller Independent School District, Texas (as quoted in EPA, 2010)

For example, the program evaluator for the Louisiana Asthma Management Program (LAMP), said that in initial meetings, LAMP staff talk about how most of the repairs are simple and no or low-cost (i.e., simply moving furniture or boxes from in-front of air vents or diluting cleaning supplies) and if something more serious is found, they reassure superintendents that there will be no fines or other punitive measures. They tell administrators that if they do encounter costly problems, they will work with them to find solutions to counter the extra expenses (like finding EPA grant money, vendors who are willing to do the work pro-bono, or demonstrating how preventive repairs can save money in the long-term). Successful asthma programs convince the school administrators that they are providing a service and that they want the same thing- a healthy school environment and better student success (personal communication, H.Ness, July 2013).

In other words, successful asthma programs are able to frame conversations in terms of issues that are important to school administrators. Instead of talking about the effects of asthma on the body, they talk about the impact of asthma on the school district. For example, it was easy for the school administrators of the North East ISD in San Antonio to get on board with asthma

North East ISD school administrators were convinced by medical community partners and the school district's medical director that an asthma initiative was necessary after research revealed that poorly controlled asthma was costing the district over 3.4 million dollars. - Asthma Community Network, n.d.

programs when they realized that asthma was a huge cause of absenteeism and that even a 1% increase in attendance at North East ISD was worth 3.4 million dollars. Proponents of asthma programs there also understood that superintendents are held accountable to taxpayers and have to show that money is well spent (Asthma Community Network, n.d.). Successful asthma programs are able to help schools demonstrate effectiveness and cost savings.

Thriving asthma programs are able to engage superintendents as team members. For those superintendents who are very reluctant, some programs have found that putting superintendents in touch with other superintendents or principals who have experienced success with Indoor Air Quality Teams and other asthma programs has proven beneficial. The program evaluator for LAMP, reported that sometimes it took several meetings and contact points before they convinced the superintendent to come on board, but eventually, he or she did agree to support Indoor Air Quality Teams (personal communication, July 2013).

Once the school superintendent was involved, LAMP staff began to target school principals. LAMP found that school nurses were all overworked and therefore not a good avenue for gaining district support (personal communication, July 2013).

However, staff with the Maryland Asthma-Friendly Schools Initiative indicated their coalition has had a difficult time working with school administrators and preferred to work instead with school nurses (even though the staff member believed that the time that nurses have to implement public health programs is very limited and is a significant barrier). The staff member suggested creating partnerships between school staff (i.e., school nurses and maintenance staff) and between school staff and other organizations (i.e., local health departments or medical organizations) (personal communication, August 27, 2013).

Another avenue for obtaining access to school administration may be through the Coordinated School Health Program (CSHP). All Texas school districts are required by law to implement such a program in grades K-8. CSHP is, “an integrated, systematic set of planned, sequential, school-affiliated strategies, activities and services designed to advance student academic performance and promote their optimal physical, emotional, social and educational development. It is coordinated by a multidisciplinary team that is accountable to the community for program quality and effectiveness. By addressing health-related issues, schools not only foster student's academic achievements, but also help to establish healthy behaviors that last a lifetime” (Coordinated School Health Program [CSHP], 2013). The CSHPs implemented by DSHS are designed using the CDC's 8-Component Model, which includes both a focus on a healthy and safe school environment as well as health education and services (CSHP, 2012). CSHP may prove to be a powerful partner as the Texas Education Code (1995), has mandated that “a school district must consider the recommendations of the local school

health advisory council before changing the district's health education curriculum or instruction" (Sec. 28. 004). To find out more about how to contact a school district's CSHP (formally known as, School Health Advisory Council [SHAC]) and to read strategic tips on how to how to get involved, refer to DSHS's publication, "**School Health Advisory Council: A Guide For Texas School Districts**" (SHAC, 2007).

Additionally, many Texas school districts have publically available strategic plans, which may help AFSI staff gain insight into the focus of the district and how AFSI can align and support those efforts.

Find Community Partners and Champions

Many successful asthma programs have found that community partners and champions have made it easier to gain entry into schools. Some asthma groups host regular meetings or focus groups with parents of children with asthma, school nurses, or school administrators to stay in touch with their needs and perceptions. Many have noted that it is impossible for one organization to do this work alone. No matter the partnership desired, it helps to clarify what each organization needs from the relationship and to define how each can benefit. It also helps to determine the best time and method to use when approaching potential partners (ALA, n.d.).

Parent Teacher Associations (PTA's) and Parent Teacher Organizations (PTO's).

Additionally, working with local PTA's and PTO's could prove helpful. The Texas PTA has partnered with the Railroad Commission to improve air quality for Texas youth. They are encouraging school districts to adopt no-idling policies around schools and at school events. Additionally, they work with several state partners to provide grants to retrofit older diesel school bus engines and to help districts purchase alternative fuel buses. According to their website, they are involved in these efforts due to their recognition that asthma is often triggered by inhaling certain pollutants and is a main contributor to school absenteeism (Texas Parent Teacher Association [Texas PTA], n.d.). PTA and PTO officers may also be able to help identify champions who could help present the case for school based asthma programs to school administrators.

Medical Partners. Successful programs generally rely upon numerous different partnerships. For example, the North East ISD in San Antonio worked with the school district's medical director and five other allergists and pediatric pulmonologists, faculty and students from the University of Texas Health Science Center (UTHSC) Department of Respiratory Care, Santa Rosa Health System, South Texas Asthma Coalition, Asthma Coalition of Texas, American Lung Association, U.S. EPA, and the Centers for Disease Control and Prevention (Asthma Community Network, n.d.).

School Partners. Some successful programs were able to gain support for school based asthma programs by helping staff understand how making schools asthma-friendly would make their work easier. For example, North East ISD team members talked with custodians about how cluttered classrooms are more of a challenge to clean. When speaking with PE teachers, they discussed the way that asthma limits students. They talked to nurses about the frequent repeat visits from children with unmanaged asthma. And finally, they articulated to administrators that classroom triggers are linked to more in-clinic time, less class time, and lower student performance on tests (Asthma Community Network, 2013). In other words, they made asthma relevant to each school employee, not just the school nurse.

**Benefits of Open Airways for
Schools of interest to
school personnel**

- Decreased absenteeism
- Fewer asthma emergencies at school
- Improved classroom performance
- Increased participation in physical activity
- Low-cost, turn-key program materials and training
- Access to the resources and support of the American Lung Association, www.lung.org

Funding Partners. Money is always a primary concern, so having a list of potential funding sources for repairs may help school administrators commit to the program more quickly. For example, the Texas Health Institute Award awards grants of \$1,200 for any school or district that would like to begin a new health program or initiative using the funds from their grant to improve the lifelong physical, mental and/or social well-being of students, staff or the greater school community (Texas Department of State Health Services [DSHS], 2013). Additionally, it may be possible to find vendors or businesses that are willing to donate repair work or underwrite the work.

Moving forward, it may be prudent to thoroughly examine the barriers to program implementation by interviewing trained OAS facilitators as originally planned, as well as interviewing ALA Health Promotion Coordinators in other regions to find out how they overcame these barriers. Additionally, talking with school superintendents who have successfully implemented school based asthma programs and Indoor Air Quality Teams may help AFSI both form partnerships and help them to understand the existing norms and barriers to change. This information will assist AFSI to frame conversations with the targeted population in terms they understand, which will then help AFSI and schools work towards the mutually set goal of reducing the educational consequences of asthma.

Cultivate a Culture of Evaluation

Adapting an integrated evaluation system should help move AFSI towards success by helping refine strategies and strengthening partnerships. One way to do this is to make it a priority to cultivate a “culture of evaluation”. While there is not an official definition of “culture of evaluation”, people usually use the term to mean that members of the organization:

- accept the use of evaluation
- understand why the organization uses evaluation
- can design or obtain advice on design of necessary evaluations
- use evaluation, particularly to support change and development

Or as Murphy (1999) states, people “refer to a known, shared policy about evaluation within the organization”.

To begin cultivating a culture of evaluation, Preskill and Mack (2013) suggest starting with an evaluative vision, a statement that “reflects the values that the organization has for learning and evaluation, and communicates evaluation’s role in strategic and organizational decision making.”

To develop an evaluative vision, AFSI organization members and stakeholders (coalition members, organizational partners, volunteers, school board members, etc.) should sit down together and answer the following questions:

1. What role might learning and evaluation play in AFSI’s activities?
2. What value will learning and evaluation add to the organization and other stakeholders?
3. How might evaluation contribute to strategic decision-making?

Sitting down with key players and partners will help AFSI create an evaluation that will add value to the organization as well as to the internal learning and capacities of their partners. By inviting organizational members and key players to the table, AFSI will learn what is important to their partners and how they might best support them in their important work. For example, school nurses and/or school administrators might benefit from learning about what their peers are doing in the field and how they are overcoming barriers and documenting success.

Additionally, continually referring to the logic model will help guide AFSI’s programming decisions. With each new activity undertaken, AFSI should refer back to the logic model to make sure it aligns with program goals and theory. The program goals and theory should be reviewed regularly to ensure that goals and theory are still relevant and obtainable.

For example, when AFSI was having trouble obtaining support for Indoor Air Quality Teams, it might have been helpful to take a step back, talk to other programs with similar goals that have experienced success, and dialogue with school administrators about their reluctance to support Indoor Air Quality Teams. Starting a conversation with reluctant school administrators would help AFSI identify barriers to implementation and explore ways to work with school administrators and nurses to overcome those barriers. This dialogue could be through phone interviews, in-person meetings, focus groups, luncheons, and/or surveys. Once these barriers are identified, new strategies and goals would likely need to be created. This feedback loop ensures evaluation guides programming and vice a versa. Just the act of engaging in purposeful dialogue is many times the tipping point that creates support.

In all, developing a successful evaluation culture means using evaluation in the day-to-day programming. It must be integrated into program activities while not becoming a burden.

LIMITATIONS & BARRIERS

Since this pilot project was limited in time and scope, it primarily served the purpose of laying the groundwork for more rigorous evaluations in the future. As such, the project had several methodological limitations.

Capacity

AFSI has historically had little evaluative capacity as it is embedded in a small satellite of the ALA with one dedicated staff member for the project. Therefore, the resource limitations of AFSI are notable. Moreover, AFSI does not have a history of using evaluation. The evaluation team spent a considerable amount of time understanding the current activities, the environment in which it is operating and drafting outcomes and goals. During the next contract year, the evaluation team will be able to support AFSI's progress towards creating an evaluative culture.

Sample Size and Lack of Data

Overall, the sample sizes were too small or non-existent to engage in statistical analysis or even provide strong qualitative analysis. Because of the poor timing of the pilot study, we could not determine whether the lack of responses to the study components (interviews, award nominations, surveys) were a reflection of lack of commitment or unavailability during end-of-year and summer periods. During the next contract year, there should be adequate time to collect a larger sample, as well as enough data to compare pre and post program measures.

CONCLUSION

It is clear from the evaluation that AFSI is finding it difficult to implement asthma educational programs and air quality teams in local schools. This could be due to ineffective strategies and/or a reluctance of school districts in the target area to implement asthma related programming. Adapting an integrated evaluation system should help move AFSI towards success by helping refine strategies and strengthening partnerships. This evaluation included three objectives.

Objective 1: Identify potential effects of OAS Training

The first objective was to identify asthma management strategies that are currently being used through interviews with school nurses who have completed the OAS training. With a sample size of one, this objective cannot be effectively measured. However, the key informant interview guide does seem to be a good tool as it facilitated good dialogue with the school nurse and captured some useful information.

Objective 2: Track Asthma-friendly School Practices

The second objective was to identify best practices in schools to reduce asthma and improve attendance through data collected on Asthma-Friendly Schools Initiative Champion Award applications. Again, this objective could not be measured as no schools applied for the award. AFSI is already creating a plan to better market this award. The evaluation team is supporting AFSI in this by collecting data from other organizations that have successfully used this award.

Objective 3: Promote the capacity of AFSI to identify changes in nurses' asthma management strategies

Finally, the team sought to establish a baseline understanding of nurses' asthma management strategies and identify areas of potential improvement. This objective was partially achieved through the implementation of a baseline assessment tool, but there were an insufficient number of new trainees to statistically examine the properties of the tool.

While the evaluation was not able to quantitatively measure progress towards the three evaluation objectives, it was able to pave the way for future evaluations by creating a logic model, supporting survey development and key informant guides, and by reviewing the best practices by other similar asthma programs in the nation.

DISSEMINATION PLAN

As final products of this plan, the UNTHSC Evaluation team provided TACP and key stakeholders with a copy of this report, a one-page evaluation brief and a power point slide presentation. Additionally, the team will meet with AFSI staff in the coming months to gather feedback on these products and develop a plan to strengthen evaluation in the coming year.

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